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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,271	11/13/2003	Kenichiro Naito	1761.1051	5658
21171 7590 03/09/2007 STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER KRAUSE, JUSTIN MITCHELL	
			ART UNIT 3682	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/09/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/706,271

Applicant(s)

NAITO ET AL.

Examiner

Justin Krause

Art Unit

3682

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2007.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-7 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The orientation of "lubricant reservoir bottom groove" is indefinite because it is unclear what constitutes the "bottom". A bottom implies a top and a reference frame to define directions, it is unclear what applicant regards as being the bottom.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1 and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Mutoh et al. (US Patent 6,068,408).

Mutoh discloses a ball retaining ring comprising:

- a ring-shaped or arcuate retainer body (see for example, figure 25 or abstract) having inner and outer peripheral surfaces opposite to each other; and
- a plurality of pockets defined in the retainer body so as to open at the inner and outer peripheral surfaces of the retainer body and spaced from each other in a direction circumferentially thereof for rollingly retaining corresponding balls therein; (abstract)

-wherein radial sides of an inner surface of each of the pockets that are opposite to each other in a radial direction of the ball retainer are defined as spherical ball bearing surfaces to which each ball contacts; (abstract, figures 5 and 6)

-wherein intermediate portions of the inner surface of each pocket with respect to the radial direction are defined as circumferential non-contact surface areas where the corresponding ball is prevented from contacting (8); and

-wherein substantially all edges of the ball bearing surfaces of the inner surface of each pocket, which contact the ball, are chamfered edges (abstract).

-wherein a radial thickness of a portion of the retainer body adjacent the pocket (13) is greater than a radial thickness of the retainer body not adjacent each pocket (12) (Fig 11).

Regarding claim 5, respective portions of one axial end of the retainer body where the corresponding pockets are defined are each provided with a pair of projections (fig 25, 12), the projections defining part of the inner surface of the pocket.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 2, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mutou (hereafter referred to as '408) in view of Mutou et al (US Patent 6,074,099, hereafter referred to as '099 to avoid confusion).

Regarding claim 2, Mutou '408 discloses all of the claimed subject matter as described above but does not disclose intersecting oil reservoir grooves extending radially.

Mutou '099 teaches radially extending oil reservoir grooves (20) to provide a means for efficiently supplying lubricant to the clearances between the cage and the balls. (Col 4, lines 30-34).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mutou '408 and add radially extending oil reservoir grooves, for the desired purpose of providing means for efficiently supplying lubricant to the clearances between the cage and balls as taught by Mutou '099.

Regarding independent claims 6 and 7, all of the claimed subject matter has been described above in the rejections of claims 1, 2, 4 and 5. Regarding the limitation in claim 7 that the radially disposed intersection lubricant reservoir groove is a "lubricant reservoir bottom groove", as best understood, the grooves are below the equator of the pocket, and therefore are considered on the "bottom" of the pocket.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mutou '408 as applied to claim 1 above, further in view of Yamamoto et al (US 2003/0012461).

Mutou does not disclose a bottom of the inner surface of each pocket is formed with a bottom oil reservoir groove of a generally concave shape.

Yamamoto teaches a ball retainer with a bottom oil reservoir groove (11) of a generally concave shape so that feeding of lubricant can be facilitated (Paragraph 0031).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Mutou to incorporate a bottom oil reservoir groove of a generally concave shape for the desired purpose of facilitating feeding of lubricant as taught by Yamamoto.

Response to Arguments

Applicant's arguments filed January 3, 2007 have been fully considered but they are not persuasive.

Applicant argues that the elastic pieces 13 of Mutoh '408 are not part of the main portion of the cage 7 and therefore does not satisfy the claimed limitation that the portion adjacent each pocket has a greater radial thickness than a portion of the retainer body not adjacent each pocket.

The examiner disagrees, finding that the language of the claim does not prohibit the examiner's interpretation, but rather, explicitly supports it. The claim requires that the radial thickness of a portion of the retainer body adjacent each pocket is greater than the radial thickness of a portion of the retainer body not adjacent each pocket.

The elastic pieces constitute a portion of the retainer body that is not adjacent to each pocket, the elastic piece having a radial thickness that is less than a portion of the cage that is adjacent the pocket.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Krause whose telephone number is 571-272-3012. The examiner can normally be reached on Monday - Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3682

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMK
JMK 3/6/07


Thomas R. Hannon
Primary Examiner